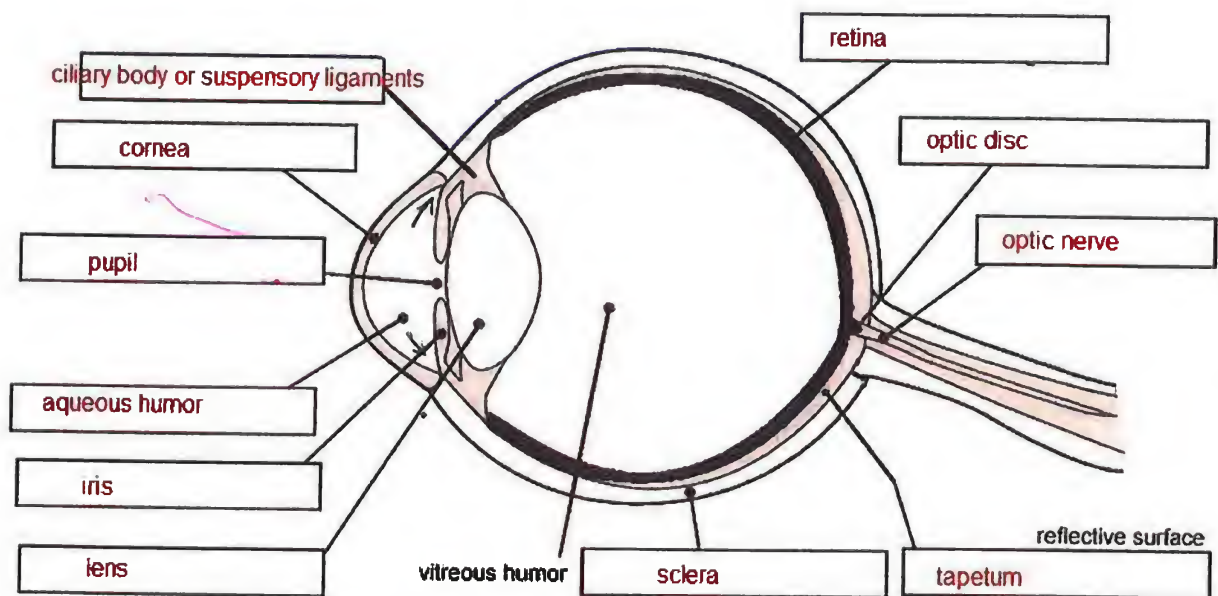


1. ANATOMY OF THE EYE

Coats of the Eyeball

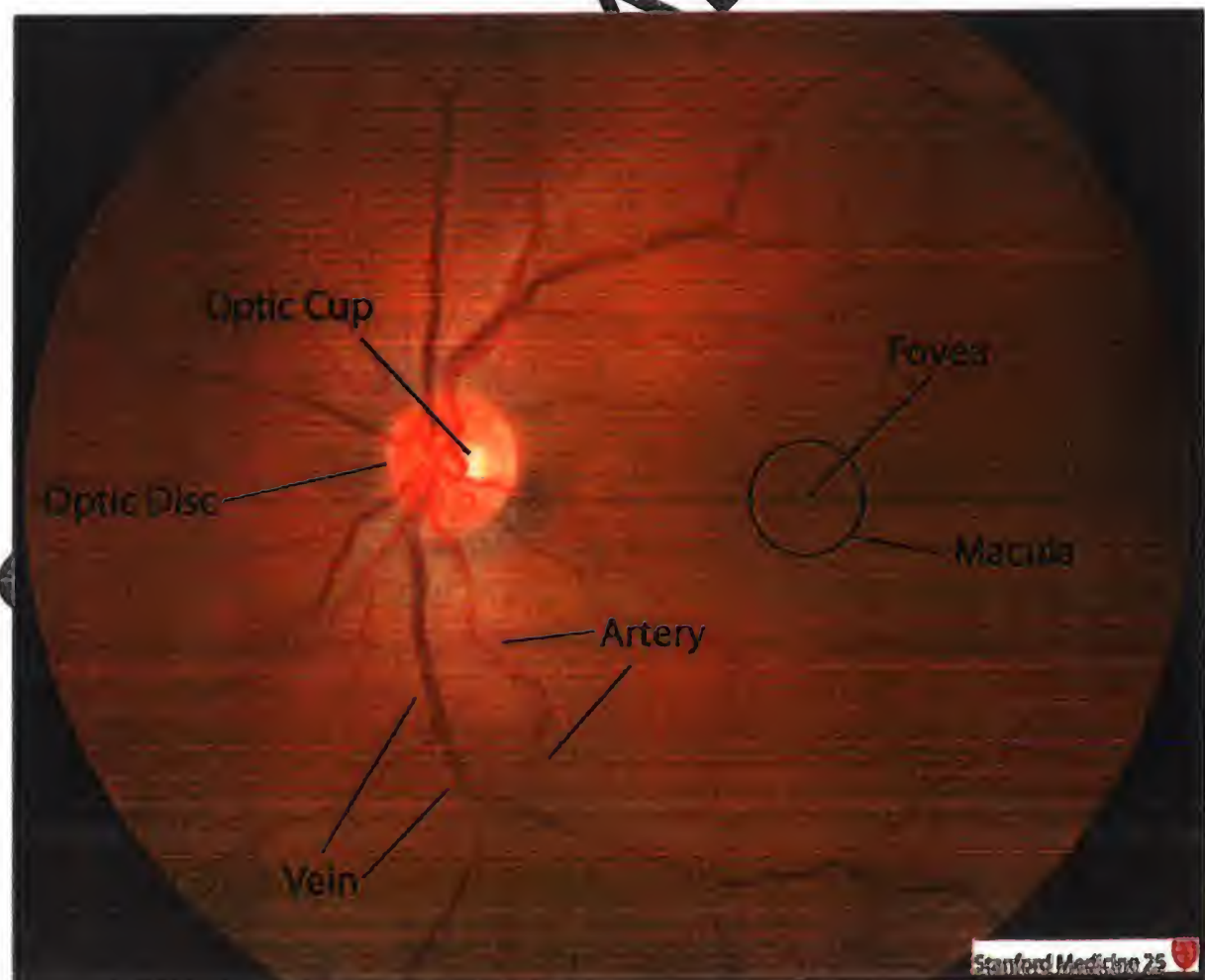
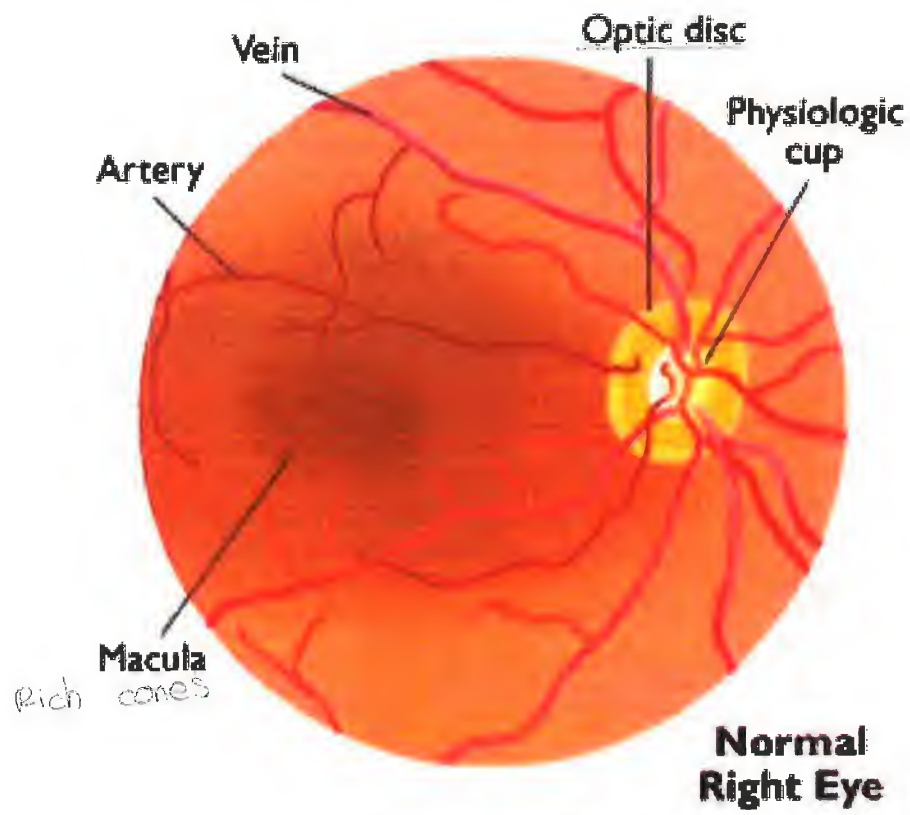
1. Sclera
2. Uvea - (iris, ciliary body comprise the anterior uvea, choroid is the posterior uvea)



3. Retina

Lens with suspensory ligaments, vitreous

- Fovea centralis (rich with cones)
- Optic disc is part of optic nerve that can be seen by ophthalmoscope
- Optic cup is depression in centre of optic disc.



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OPHTHALMOLOGY 2016

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{ sudden acute 1 eye
painless loss of vision

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4. Acute Closed Angle Glaucoma

5. Optic neuritis

3. Chronic Glaucoma

4. Giant Cell Arteritis

5. Macular Degeneration

1. Dry Age Related

- Fovea centralis (rich with cones)
- Optic disc is part of optic nerve that can be seen by ophthalmoscope
- Optic cup is depression in centre of optic disc.

Normal Retina

2. LOSS OF VISION

Causes:

1. **CENTRAL RETINAL ARTERY OCCLUSION** (Severe visual loss to finger counting or hand movement)

- Usually elderly patient one eye
- Sudden onset of visual loss (painless)
- Associated with hypertension and diabetes
- lose finger counting

On examination: plus or minus carotid bruit

Fundoscopy: Optic disc is pale due to ischaemia. Cherry red spots on macula. Sometimes cholesterol is visible in the retinal arteries

Causes: Arteriosclerosis, Emboli

Investigations:

- Slit lamp examination
- Fundoscopy (Pale Optic Disc)

-Carotid Doppler- If carotid bruit

⊕ cherry red spot
in the macula

T/M:

ocular
-Macular massage

-Anterior chamber paracentesis (↓ intra-ocular pressure)

-I/V Acetazolamide if raised intraocular pressure

2. CENTRAL RETINAL VEIN OCCLUSION

Common in Obese men > 60 years old

* edema macular

-Also associated with HTN and diabetes with gradual onset

-It can have a sudden onset

⊕ Polycythemia Vera
associated

-Usually patient wakes up in the morning with loss of vision due to decreased blood flow during night.

⊕ Myeloma
associated

Risk Factors: Polycythemia Rubra Vera

⊕ Atherosclerosis

-Cancer

{ ischemia
macular edema

Fundoscopy: flamed shaped haemorrhages and hard exudates. Stormy sunset or tomato splash appearance

Inx: -Slit Lamp

-Fundoscopy

Treatment: Reduce risk factors (DM, HTN, Smoking)

-If increased intraocular pressure ^{moderate} acetazolamide 500 mg / IV

IV

3. RETINAL DETACHMENT

Risk Factor: Myopia (or simply short sighted) ^{myopia}

-May be caused by trauma

-Sudden onset

-Like a curtain coming down or like a flashing light like a camera

Investigations:

-Slit lamp investigation

-Fundoscopy

Treatment: Surgery (It will not resolve on its own unless surgery is done). ^{sclero band}

4. ACUTE CLOSED ANGLE GLAUCOMA

-Sudden loss of vision

-Acute red eye with pain

-Acute loss of vision with nausea and vomiting

- Halos on looking at light

-Plus or minus tunnel vision

Nausea and vomiting indicate closed angle,

On examination: corneal oedema fixed and dilated pupil, IOP greater than 40mmHg, shallow anterior chamber

(10-20 normal)

Risk factors: family history, common in female, increased age

Investigations:

-Measurement of intraocular pressure (tonometry)

Treatment:

-Acetazolamide intravenously 500mg

-Pilocarpine drops, dexamethasone drops (Steroid drops),

-Beta blockers- betoxalol, Timolol

If IOP pressure still persistently high then use Mannitol.

Dilating eye drops are contraindicated.

↳ in late stage
acute → only constrictors

5. Optic Neuritis

- Common in multiple sclerosis
- Optic disc is pale
- Dull pain in the eye (in eye movement)
- Usually young female patient (18 to 40 years in MS)
- Loss of red colour vision initially
- Sudden loss of vision, which is painless with possible similar symptoms in the past, which resolved completely (weeks or months).

⊙ impaired color vision (dyschromatopsia)

6. Vitreous haemorrhage

- causes: diabetes, bleeding disorders

HTA

sickle cell disease

Dx. MRI

↳ definitive

lumbar puncture

- features may include sudden visual loss, dark spots

7. Ischaemic optic neuropathy

- may be due to arteritis (e.g. temporal arteritis) or atherosclerosis (e.g. hypertensive, diabetic older patient)
- due to occlusion of the short posterior ciliary arteries, causing damage to the optic nerve
- altitudinal field defects are seen

Differentiating posterior vitreous detachment, retinal detachment and vitreous haemorrhage

Posterior vitreous detachment

Flashes of light (photopsia) - in the peripheral field of vision
 Floaters, often on the temporal side of the central vision

Retinal detachment

Dense shadow that starts peripherally progresses towards the central vision

A veil or curtain over the field of vision

Straight lines appear curved

Central visual loss

Vitreous haemorrhage

Large bleeds cause sudden visual loss

Moderate bleeds may be described as numerous dark spots

Small bleeds may cause floaters

3. CHRONIC GLAUCOMA

-No vomiting/nausea

- No headache or red eye
- Usually gradual loss of vision
- Fundoscopy shows disc cupping or simply increased cup: disc ratio

- Most people see halos around the light (night time)
- Can cause tunnel vision

Investigation: Measurement of IOP

Treatment -Eye drops - pilocarpine

- Beta-blocker eye drops

4. GIANT CELL ARTERITIS aka TEMPORAL ARTERITIS aka CRANIAL ARTERITIS

- Age >50 years
- Common in females
- Unilateral headache
- Sudden loss of vision usually unilateral, worse with combing hair
- Temporal Arteritis, cranial arteritis

-Weight loss, unilateral headache worse on combing hair, weakness in upper limbs (polymyalgia rheumatica 25%)
(proximal weakness)

Investigations:

-ESR is raised- this is initial investigation

⊛ jaw claudication

-Temporal artery biopsy is definitive

NB: If you don't treat one eye you will lose vision in the other eye.

Treatment: Admit, Initially intravenous Methyl prednisolone is given for three days, followed by oral steroid (Prednisolone) for 2-3 ^{days} high dose. Then reduce the dose gradually.

SIDE EFFECTS of STEROIDS

- 1) GIT Bleeding- give PPI to prevent
- 2) Osteoporosis- Give Bisphosphonates to prevent ^{ost}
- 3) DM- If ↑ glucose give short acting Insulin
- 4) HTN- Treat and monitor
- 5) Cataract- Regular check ups and surgery
- 6) Suppressed Immune System- watch out for fever
- 7) Cushing Syndrome
- 8) Addison's disease

5. MACULAR DEGENERATION:

DRY

WET

* central vision affected

1. DRY AGE-RELATED MACULAR DEGENERATION

Risk factors: Increasing age, smoking, alcohol and female sex.

Symptoms:

- Gradual onset of decreased vision, ^{difficult} initially to read and recognise faces due to loss of central field of vision.

- Central Scotoma (walking into desks)

- It is due to photoreceptors

- Patient sees wavy lines

- Macula has pigmentation geographically

- Bumps into objects

- 30% inheritance

Investigation: Fundoscopy or slit lamp examination you see a large area of geographical atrophy at the macula and pigmentation.

Treatment: No treatment, just reduce the risk factors and supportive treatment.

2. WET AGE RELATED MACULAR DEGENERATION

- Less common than dry macular degeneration *new vessels

- There is accumulation of fluid, which decreases the membranes of the macula

- There sudden loss of vision

-On examination of the fundus you see grey or yellow plaque like membrane.

6. Transient Ischemic Attack (TIA)

-Sudden onset of symptoms such as visual loss, dysphasia, or weakness in the limbs. Symptoms resolve quickly within minutes or hours (< 24hrs). (amaurosis fugax)

-Risk factors include: diabetes, HTN, AF, valvular heart disease

-Amaurosis fugax-loss of vision like curtain coming down. It resolves on its own.

7. CATARACT

-This is opacity in the lens

-Usually in elderly patient

-Usually causes blurred vision

-Bilateral cataract causes gradual visual loss plus or minus frequent change of glasses

Investigation: 1) Slit lamp 2) Fundoscopy

Treatment: Surgery

8. OPTIC ATROPHY (MS=Optic Neuritis, GCA)

- Optic disc is pale

- Secondary to glaucoma or retinal damage

- heavy smoker
- arsenic industry
- methanol

- or due to ischemia (retinal artery occlusion)
- Toxic causes: tobacco, methanol, lead arsenic they cause amblyopic
- M.S Syphilis, external pressure on ^{optic} nerve

- vision 1 eye do not develop properly (congenital)

9. KERATITIS

9.1 BACTERIAL KERATITIS

- Inflammation of cornea
- This is the commonest cause of Infectious Keratitis
- Bacterial Keratitis covers all organisms, which causes Keratitis in a group of bacteria. *Pseudomonas aeruginosa*

CAUSES: The commonest cause is Pseudomonas Aeruginosa especially in those wearing contact lenses, staphylococcus aureus/epidermidis, and streptococcus. Pseudomonas causes purulent discharge

SYMPTOMS: Increasing foreign body sensation, pain, red eyes, photophobia and reduced vision (which is not the case in conjunctivitis)

Investigation: eye corneal swab and culture.

Treatment: Antibiotics Cefuroxime eye drops

9.2 Acanthamoeba Keratitis

This is sight threatening caused by free living amoeba (a protozoa) which is found in tap water, swimming pools, fresh water and soil

- Also common in contact lens wear

- Especially those that swim with contact lenses or washing them under tap water.

Investigation: Swab and culture

Treatment: anti-septic e.g. eye drops Chlorhexidine

9.3 FUNGAL KERATITIS

- Common in contact lens wear, diabetes, immunocompromised, agricultural trauma (farmers). *Aspergillus*

- Cause is fungus aspergillus or fusarium

INVESTIGATION: swab and culture

TREATMENT: Topical Amphotericin.

9.4 VIRAL KERATITIS

- Usually follows an upper respiratory tract infection.

- Commonest cause is herpes simplex virus \

- Also called herpes simplex keratitis

- Presents with red eye, watering, photophobia and foreign body sensation.

- Herpes simplex keratitis causes dendritic ulcer

On examination of the cornea there is 1 or more linear branching dendritic ulcers with terminal bulb appearance at the ends.

- If topical steroid *contraindicated* are used the dendritic ulcer enlarges into large geographical ulcers which can lead to total blindness.

- Very painful keratitis

- Therefore steroid drops are contraindicated

*steroid drop
→ blindness*

INVESTIGATION: Florescence examination of the cornea.

-Diagnosis is clinical.

TREATMENT: Topical Acyclovir for 2 weeks

9.5 EXPOSURE KERATITIS

-This is due to inability to close the eye and the cornea is constantly exposed to air and becomes dry.

-Common with facial nerve palsy and sometimes seen after drinking a lot of alcohol

-Treatment: eye lubricant/artificial tears

Thyroid eye disease

Thyroid eye disease affects between 25-50% of patients with Graves' disease.

Features

- the patient may be eu-, hypo- or hyperthyroid at the time of presentation
- exophthalmos
- conjunctival oedema
- optic disc swelling
- ophthalmoplegia
- inability to close the eye lids may lead to sore, dry eyes. If severe and untreated patients can be at risk of exposure keratopathy

Orbital Cellulitis

- acute spread of infection
- pain in the eye on movement
- bulging of the eye (proptosis)
- redness swelling of eyelids
- discharge
- *S. aureus* and *S. pneumoniae*

common children

Bencilpenicillin
Flucloxacillin
Flucloxacillin

initial swab
- Dx etc

pt. pupil
relaxation → no pain in eye
movement

10. FOREIGN BODY:

METALS OTHERS (wood, cotton, sand and grass etc.)

METALS

-Welders

-In cutting metals

Can cause penetrating trauma- Intra-ocular Foreign Body

Investigations: X-ray orbit

Tx. Referral to ophthalmology

OTHER FOREIGN BODIES: wood especially when working in the garden,
cotton, grass

Examine with fluorescence and remove the foreign body

Tx

11. ANTERIOR UVEITIS (Iris + Ciliary Body)

-Inflammation of the iris is called Iritis, which is part of anterior Uveitis.

-Inflammation of ciliary body and iris (anterior uvea)

-Associated with Ankylosing Spondylitis (Young male with back pain)

Rheumatoid Arthritis, Sarcoidosis, SLE, Bechet's disease, Juvenile idiopathic arthritis and inflammatory bowel disease.

Symptoms: pain, photophobia, blurred vision, red eye,

Investigations:

-Slit lamp examination shows cells in anterior chamber with flare, pupils are small (Miosis) and irregular

-Human Leucocyte antigen HLA B27 association could be a cause (sero-negative arthritis)

Treatment:

-0.5% Prednisolone drops

-Cyclopentolate (dilating drops)

Retinitis pigmentosa

Retinitis pigmentosa primarily affects the peripheral retina resulting in tunnel vision

Features

- night blindness is often the initial sign
- tunnel vision (the preferred term for tunnel vision)
- fundoscopy: black bone spicule-shaped pigmentation in the peripheral retina, mottling of the retinal pigment epithelium

Treatment :

supplements such as Vit.A, lutein & omega 3 fatty acid may slow the disease.

12. RED EYE:

CAUSES:

1. Viral conjunctivitis
2. Bacterial conjunctivitis
3. Foreign body
4. Closed angle glaucoma
5. Anterior Uveitis
6. Subconjunctival haemorrhage
7. Cluster headache
8. Corneal abrasion
9. Trauma
10. Scleritis
11. Episcleritis
12. Keratitis

12.1 Sub conjunctival Haemorrhage:

- No loss of vision
- Spontaneous painless bleed.
- Usually in patients with HTN or Warfarin (raises INR)

Investigations: Check for coagulation and blood pressure

Treatment: Reassurance if bloods are normal. Usually resolves in 10 to 14 days.

12.2 Viral conjunctivitis:

-Acute red eye with lacrimation

-Watery discharge

-This is the commonest cause of conjunctivitis

*-Matting of eye lids in morning

-Photophobia and FB sensation in the eye.

Treatment: -Chloramphenicol drops to prevent bacterial infection or simply

-Topical antibiotics

12.3 Bacterial Conjunctivitis:

Acute red eye, lacrimation, foreign body sensation in the eye

Purulent discharge

-Matting of lids in the morning

-Easily spreads in the family and hence members of same family may also have similar symptoms

Treatment -Chloramphenicol drops or simply topical antibiotics

staph. aureus
strepto.

12.4 Corneal Abrasion:

Common in adults (usually mothers) after fingernail scratch by a baby

Treatment:

- Usually heals on its own in 2 to 3 days.
- Topical antibiotics i.e. Chloramphenicol eye drops to prevent infection.

12.5 Episcleritis

- Inflammation below the conjunctiva in the Episclera, is often seen with an inflammatory nodule.
- Sclera looks blue below engorged vessels
- Dull eye aches with tenderness over inflamed area
- It might complicate Rheumatic fever, PAN and SLE

Rx: Topical or Systemic NSAIDS.

12.6 SCLERITIS

More significant pain when associated with connective tissue disease

Scleral thinning

Rx Refer to ophthalmologist

Most will need oral steroid drops or immunosuppressive therapy

FUNDOSCOPY:

1. Optic neuritis=The optic disc is pale and patient has loss of vision
2. Retrobulbar Neuritis=optic disc is normal and patient has loss of vision
3. Papilloedema (pictured below) =Optic disc is oedematous and congested but patient has no loss of vision.

13. ACUTE DACROCYCTITIS

Inflammation of the lacrimal gland and tear ducts leading to formation of mucocoele i.e. enlarged lacrimal gland with pus. Usually located on the nasal side of eye. When you press the swelling pus is discharged.

Treatment: Oral antibiotics

14. DRY EYES:

Sjogren's syndrome is a common disease which causes dry eyes, dry mouth and dry vagina

- Dry vagina causes dyspareunia (Pain during sexual intercourse)
- Dry mouth causes difficulty in swallowing

Inx: Schimmers test positive

Treatment: Artificial tears (Visco tears)

15. EXTERNAL EYE PATHOLOGIES

15.1 Pinguecula

Degenerative yellow nodules on conjunctiva on either sides of cornea (typically nasal sides)

Rx: Topical steroid

15.2 Pterygium:

Degenerative wing shaped white/yellow nodules that encroach on to the corneal corners

Rx: Steroid can help but surgery may be needed

15.3 Ophthalmic shingles

This is the herpes zoster infection of the ophthalmic branch of 5th cranial nerve i.e. the trigeminal nerve. It is common in elderly due to immunocompromised state.

S/S: Pain, tingling around the eye and burning sensation on the scalp. There is a visible blistering rash.

May cause:

- Mucopurulent conjunctivitis
- Scleritis
- Epscleritis
- Visual loss
- V nerve palsy - which presents as loss of sensation on the cornea
- Keratitis
- Iritis
- Optic Atrophy

Rx: Aciclovir Po for 14 days

Referal

15.4 Retinoblastoma:

Most common primary intra ocular tumour in children.

S/S:

- Strabismus
- White pupil (leucocoria)
- Absent red reflex

Rx: Enucleation (to take the eye out) with radiotherapy (Not usually used nowadays)

Focal procedures to preserve eye

16. PUPILS

Muscles of the Eye: Superior Oblique is supplied by the 4th cranial nerve and the lateral rectus by the sixth. The rest are innervated by the 3rd Nerve

LIGHT REFLEX (Pupillary Reflex)- Direct and Consensual

Afferent - Optic nerve injury - absent direct reflex

Efferent - Oculomotor Nerve injury

Causes of fixed dilated pupils:

- 3rd CN injury
- Mydriatics (dilating eye drops)

- Trauma to iris
- Acute Glaucoma

1. Adie Pupil

- Large Pupil
- Poor accommodation (slow to react)
- Degeneration of the parasympathetic ganglion

2. Argyll Robertson Pupil

- Small and irregular pupils poorly react to light but good accommodation.
- Commonly caused by Syphilis and DM

Pupils of different sizes = anisocoria

17. LENS

ERRORS OF REFRACTION

1) Myopia (short sightedness)

Concave lenses for correction

2) Astigmatism: defect in the curvature of lens and the cornea

Cylindrical lenses for correction

3) Hypermetropia: (long sightedness)

Convex lenses for correction

4) Presbyopia: It usually starts at the age of 40. In elderly lens becomes stiffer - long sightedness

Loss of accommodation.

18. The EYE in DM

Structural changes: Accelerates the formation of cataract

Retinopathy:

- Background Retinopathy: Micro aneurysms, dot & blot haemorrhage and hard exudates (no soft exudates)
- Pre-Proliferative: Micro aneurysms, dot & blot haemorrhages plus soft exudates (aka cotton wool spots) + soft exudates
- Proliferative Retinopathy: new vessel formation
- Maculopathy: leakage close to haemorrhage exudates^ macula

Rx:

1. Good control of DM, Heart disease, Renal disease, Increased lipids (cholesterol)
2. Photo coagulation for maculopathy & proliferative retina

19. BLEPHRITIS:

Inflammation on the lid margins. Very common

- This is chronic lid inflammation.

Symptoms

- Burns, itching, FB sensation

- Hard + brittle scales
- An external style may develop if follicles infected

20. Tears and Lacrimation

- Keratoconjunctivitis Sicca due to decreased tear production
- Sjogren's syndrome
- Mumps
- Sarcoidosis
- Lymphoma
- Leukaemia
- SLE
- Scleroderma

Investigation: Shimmer's test

Treatment: artificial

21. CHEMICAL INJURY

The main treatment is irrigation of the eye with normal saline.

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OPHTHAMOLOGY SINGLE BEST ANSWER 2016

1. A 73 year-old man complains of severe right-sided head ache associated with an acute loss of right sided vision. Urgent treatment is needed to prevent left sided vision loss. What is the most appropriate diagnosis?

- A. Acute closed angle glaucoma
- ✓ B. Cranial arteritis GCA
- C. Retinal detachment
- D. Trauma
- E. Vitreous haemorrhage

2. A 75-year-old woman has difficulty watching television and complains of peripheral constriction of vision. On examination there is cupping of both optical discs. What is the most appropriate diagnosis?

- A. Acute closed angle glaucoma
- ✓ B. Chronic glaucoma
- C. Conjunctivitis
- D. Multiple sclerosis
- E. Corneal abrasion

3. A 50-year-old man with a history of Systemic Lupus Erythematosus complains of loss of vision. On examination he is found to have multiple opacities in the lens of the eyes. What is the most appropriate treatment? cataracts

- A. Steroid eye drops
- B. Antibiotic eye drops
- ✓ C. Surgery

- D. No treatment required
- E. Acetazolamide orally

4. A diabetic on oral hypoglycaemic medication complains of sudden deterioration in vision of his right eyes on examination he is found to have bilateral proliferative retinopathy with retinal haemorrhage on the right side. What is the most appropriate treatment?

- ✓ ☒ A. Laser Photocoagulation
- B. Surgery
- C. No treatment
- D. Paracentesis
- E. Intraocular pressure reduction

5. An 80-year-old woman has markedly decreased visual acuity. On fundoscopy she is found to have bilateral macular pigmentation. What is the most appropriate treatment?

- ✓ ☒ A. No treatment
- B. Surgery
- C. Pilocarpine eye drops
- D. Steroid eye drops
- E. Antibiotics eye drops

macular degeneration

6. A 40-year-old man presents with sudden loss of vision vomiting and severely painful red eye for one day. What is the most appropriate diagnosis?

- A. Central retinal artery occlusion
- B. Central retinal vein occlusion
- C. Retinal detachment
- D. Uveitis
- ✓ ☒ E. Acute Glaucoma

7. A 64-year-old man with a long history of hypertension and diabetes woke up in the morning with sudden loss of vision in his left eye. What is the most likely diagnosis?

- A. Central retinal artery occlusion
- ✓ ☒ B. Central retinal vein occlusion
- C. Retinal detachment
- D. Uveitis

E. Acute Glaucoma

8. A 23-year-old man complains of deteriorating vision with eye pain. On examination there is circumcorneal injection and irregular pupil. In the past he had several attacks of back pain and stiffness for a while.

What is the most likely diagnosis? *esp Ankylos*

- A. Acute glaucoma
- B. Occipital infarct
- C. Pituitary infarct
- ✓ ☒ D. Uveitis
- E. Migraine

9. A 68-year-old woman with lung cancer had cough and was admitted in the hospital. The next morning she could not see her breakfast tray.

What is the most likely diagnosis? *overnight*

- A. Central retinal artery occlusion
- ✓ ☒ B. Central retinal vein occlusion
- C. Retinal detachment
- D. Uveitis
- E. Acute Glaucoma

10. A 68-year-old man with severe head ache and red eyes complains of sudden loss of vision in right eye. His fundoscopy reveals a pale disc.

What is the most likely diagnosis?

- A. Cataract
- ✓ ☒ B. Temporal arteritis
- C. Amaurosis fugax
- D. Uveitis
- E. Migraine

11. A 36-year-old man complains of loss of vision and photophobia. Fundoscopy reveals cupping of the optic disc. What is the most likely diagnosis?

- ✓ ☒ A. Chronic simple glaucoma
- B. Temporal arteritis
- C. Amaurosis fugax
- D. Uveitis
- E. Migraine

12. A 30-year-old woman has gradual onset of tunnel vision, dull constant headache and fatigue. On examination she has a bi-temporal hemianopia. What is the most likely diagnosis?

- ☒ A. Pituitary tumour
- B. Occipital lobe tumour
- C. Optic neuritis
- D. Chronic glaucoma
- E. Acute glaucoma

adenoma

13. A 60-year-old woman admitted with sudden weakness in her right arm and says she cannot always see her visitors. On examination she has a right homonymous upper quadrant-anopia. What is the most likely diagnosis?

- A. Pituitary tumour
- B. Occipital lobe tumour
- C. Optic neuritis
- D. Chronic glaucoma
- ☒ E. Temporal lobe infarction

14. A 50-year-old man complains of an episode of visual loss on one eye like a curtain falling over it. This resolves after 15 minutes. What is the most likely diagnosis?

- A. Cataract
- ☒ B. Amaurosis fugax
- C. Macular degeneration
- D. Renal detachment
- E. Optic atrophy

15. A 50-year-old woman complains of very gradual onset of tunnel vision with no other symptoms. Her optic disc shows cupping. What is the most likely diagnosis?

- A. Pituitary tumour
- B. Occipital lobe tumour
- C. Optic neuritis
- ☒ D. Chronic glaucoma
- E. Acute glaucoma

16. A 70-year-old woman has gradually lost her vision such that she cannot read, even with glasses. Apart from loss of acuity, eye examination is normal. What is the most likely diagnosis?

- A. Optic atrophy
- B. Amaurosis fugax
- ✓ C. Cataract
- D. Chronic glaucoma
- E. Acute glaucoma

17. A 35-year-old man presents with pain in the right eye, vomiting and loss of vision. What is the most appropriate diagnosis?

- ✓ A. Acute Glaucoma
- B. Central retinal vein occlusion
- C. Central retinal artery occlusion
- D. Cranial arteritis
- E. Uveitis

18. A 55-year-old known diabetic and hypertensive wakes up in the morning with diminished vision. What is the most appropriate diagnosis?

- A. Acute Glaucoma
- ✓ B. Central retinal vein occlusion
- C. Central retinal artery occlusion
- D. Cranial arteritis
- E. Uveitis

19. A 25 year old man presents to the Accident and Emergency Department with pain in the right eye associated with backache. What is the most appropriate diagnosis? AE

- A. Acute Glaucoma
- B. Central retinal vein occlusion
- C. Central retinal artery occlusion
- D. Cranial arteritis
- ✓ E. Uveitis

20. An elderly woman presents with a history of visual loss and scalp soreness. What is the most appropriate diagnosis?

- ✓ A. Cranial arteritis
- B. Uveitis

- C. Direct trauma
- D. Retinal detachment
- E. Occipital lobe infarct

21. An elderly man who is an inpatient for hypertension wakes in the morning and notes that he can't see his breakfast. He has no other complaints. He has a carotid bruit. What is the most appropriate diagnosis?

- A. Acute Glaucoma
- B. Central retinal vein occlusion
- ✓ C. Central retinal artery occlusion
- D. Cranial arteritis
- E. Uveitis

22. A 70-year-old man presents with recurrent attacks of short lasting loss of vision in one eye only. What is the most appropriate diagnostic test?

- ✓ A. Doppler assessment of carotid arteries
- B. Echocardiogram
- C. Electroencephalogram (EEG)
- D. Isotope brain scan
- E. Lumbar puncture

23. A 70 year old man presents with reduced vision in both eyes visual field testing shows a homonymous upper quadrant anopia. What is the most appropriate diagnostic test?

- A. Magnetic resonance imaging (MRI) of parietal lobes
- B. Magnetic resonance imaging (MRI) of temporal pituitary
- ✓ C. Magnetic resonance imaging (MRI) of temporal lobes
- D. Orbital goniometry
- E. Visual evoked responses

24. A 30-year-old man presents with sweating increasing shoe size and bi-temporal hemianopia. What is the most appropriate diagnostic test?

- A. Magnetic resonance imaging (MRI) of parietal lobes
- ✓ B. Magnetic resonance imaging (MRI) of the pituitary
- C. Magnetic resonance imaging (MRI) of temporal lobes
- D. Orbital goniometry

E. Visual evoked responses

25. A 70-year-old woman presents with sudden loss of vision in the right eye she also suffers from headaches and examination reveals tenderness of her scalp on both sides. What is the most appropriate initial test? GCA

- A. Doppler assessment of carotid arteries
- B. Echocardiogram
- C. Electroencephalogram EEG
- D. Isotope brain scan
- ✓ ☒ E. Erythrocyte sedimentation rate ESR

26. A 78-year-old man had a painful scalp and headache for three weeks and is generally unwell. He presents with acute onset of blindness in the right eye. What is the most likely diagnosis?

- A. Retinal detachment
- ✓ ☒ B. Temporal arteritis GCA
- C. Uveitis
- D. Acute glaucoma
- E. Cataract

27. A 50-year-old woman complains sudden loss of vision in one eye. She describes the incident like a curtain coming down. What is the most likely diagnosis?

- ✓ ☒ A. Retinal detachment
- B. Temporal arteritis
- C. Uveitis
- D. Acute glaucoma
- E. Cataract

28. An 84-year-old woman notices sudden increasing visual impairment. She is found to have homonymous hemianopia. What is the most likely diagnosis?

- ✓ ☒ A. Cerebral infarct
- B. Chronic Glaucoma
- C. Hypertensive encephalopathy
- D. Uveitis
- E. Temporal arteritis

29. A 68 year old smoker suddenly notices markedly reduced vision in one eye. He cannot read any letter on the visual acuity chart, but can count fingers. The fundus looks pale. What is the most likely diagnosis?

- A. Acute glaucoma
- B. Cataract
- ✓ C. Central retinal artery occlusion
- D. Cerebral haemorrhage
- E. Chronic glaucoma

30. A 35-year-old metal worker has had slight blurring of vision with discomfort in the left eye for 24 hours. The previous day he felt transient pain in the eye while working. What is the most likely diagnosis?

- A. Cerebral infarct
- B. Chronic Glaucoma
- C. Hypertensive encephalopathy
- ✓ D. Intra-ocular foreign body
- E. Temporal arteritis

31. A 40-year-old man presents with short history of pain redness and watering of the right eye he has photophobia and feels his vision is slightly blurred. He has had previous episodes of vesicular eruption around the mouth. What is the most likely diagnosis?

- A. Band keratopathy
- B. Corneal abrasion
- ✓ C. Dendritic ulcer
- D. Familial corneal dystrophy
- E. Intraocular foreign body

32. A 25-year-old woman presents with pain and watering of the right eye on waking. There has been similar episodes in the past few months. One year earlier her right eye was injured by baby's nail. What is the most likely diagnosis?

- A. Band keratopathy
- ✓ B. Corneal abrasion
- C. dendritic ulcer
- D. Intraocular foreign body
- E. Limbal dermoid

33. A 35-year-old man complains of longstanding fleshly swelling of the whites of both eyes. What is the most likely diagnosis?

- A. Band keratopathy
- B. Corneal abrasion
- C. dendritic ulcer
- D. Keratoconus
- ✓ ☒ E. Pterygium

34. An 18-year-old man presents with a history of sore throat and is found to have cervical lymphadenopathy and bilateral red eyes. What is the most likely diagnosis?

- A. Band keratopathy
- B. Corneal abrasion
- C. dendritic ulcer
- D. Familial corneal dystrophy
- ✓ ☒ E. Viral Conjunctivitis

35. A 50-year-old man complains of loss of vision in one eye, which resolves after 15 minutes. What is the most likely diagnosis?

- ☒ A. Amaurosis fugax
- B. Retinal detachment
- C. Migraine
- D. Central retinal vein occlusion
- E. Acute glaucoma

36. A 50-year-old man has gradual onset of headache, tunnel vision and bi-temporal hemianopia. What is the most likely diagnosis?

- A. Acute closed angle glaucoma
- B. Retinal detachment
- C. Amaurosis fugax
- D. Pituitary tumour
- E. Occipital lobe infarction

37. A 38-year-old man suddenly noticed markedly reduced vision in his right eye. He cannot read the visual acuity chart and can only count fingers. The fundus looks red and intensively hyperaemic. What is the most likely risk factor?

- A. Hypocalcaemia
- B. Myopia
- C. Immuno-suppressant
- D. Astigmatism
- ✓ ☒ E. Polycythaemia Rubra Vera

38. A 57-year-old man complains of sudden loss of vision in his right eye. He describes the incident like a curtain coming down. What is the most likely risk factor?

- ✓ ☒ A. Myopia
- B. Hypermetropia
- C. Hereditary
- D. Myxoedema
- E. Sjogren's syndrome

39. A 59-year-old man says he is always running into objects his vision is blurred and also complains of dazzling in bright light. What is the most likely risk factor?

- ✓ ☒ A. Hereditary
- B. Myopia
- C. Candidiasis
- D. Immuno-suppressant
- E. Astigmatism

40. A 39-year-old woman complains of gritty feeling in her eyes. A Schirmer's test is performed and found to be positive. What is the most likely risk factor?

- A. Hereditary
- B. Myopia
- C. Hypermetropia
- ✓ ☒ D. Sjogren's syndrome
- E. Polycythaemia Rubra Vera

41. A 60-year-old patient complains of severe pain in his left eye with severe deterioration of vision. He had noticed haloes around street light at night for a few days before the onset of the pain. What is the most appropriate mode of management?

- A. Oral steroids

- B. Acetazolamide orally
- ✓ ☒ C. Acetazolamide intravenously
- D. Acyclovir eye drops
- E. Steroid eye drops only

42. A mother brings her 2-year-old child with a squint. On examination a leucokoric right pupil is seen with an absent red reflex. What is the most appropriate mode of management?

- A. No treatment required
- B. Oral antibiotic therapy
- C. Immediate antibiotics therapy
- ✓ ☒ D. Enucleation
- E. 0.5% prednisolone 4 hourly

43. A 12-year-old Libyan boy gave a two week history of discomfort redness and muco-purulent discharge affecting both eyes. His two siblings have a similar problem. What is the most appropriate mode of management?

- A. Enucleation
- B. Oral steroids
- ✓ ☒ C. Topical antibiotics
- D. Acyclovir eye drops
- E. Total Iridectomy

44. A 23-year-old man has a history of recurrent attacks of blurring of vision associated with redness, pain and photophobia, both eyes have been affected in the past. His older brother is currently being investigated for bowel disease and a severe backache. What is the most appropriate mode of management? *uveitis AE HLB 20*

- ✓ ☒ A. Prednisolone 0.5% drops 2 hourly and cyclopentolate drops
- B. Acetazolamide orally
- C. Paracentesis
- D. Antibiotics eye drop
- E. No treatment

45. A 25-year-old cricket player sustained facial injuries 10 months later he presented with a painful swelling at the left medial canthus

associated with red eye and purulent discharge. What is the most appropriate mode of management?

- ☐ A. Immediate antibiotics therapy orally
- ☐ B. Prednisolone orally
- ☐ C. Check blood pressure
- ☐ D. Paracentesis antibiotic eye drops
- ☐ E. 500mg acetazolamide

dacryocystitis

46. A 42-year-old man became aware of severe pain in his right eye whilst, trimming his garden hedge. He presents to the A and E department with blepharospasm and photophobia in the affected eye. What is the most appropriate investigation?

- ☐ A. Eye swab
- ☒ B. Fluorescein staining
- ☐ C. Intraocular pressure measurement
- ☐ D. X-ray orbit
- ☐ E. Autoantibodies

47. A 75-year-old woman presents with a 24-hour history of severe headache nausea and vomiting. She has blurred vision in the right eye. What is the most appropriate investigation?

- ☐ A. Fluorescein staining
- ☐ B. Eye swab
- ☒ C. Intraocular pressure measurement
- ☐ D. Lacrimal sac washout
- ☐ E. Blood Auto-antibodies

AC AG

48. A 46-year-old woman has had rheumatoid arthritis for 15 year. She complains of sore red eyes and has a dry mouth and dyspareunia. What is the most appropriate investigation?

- ☐ A. Skin prick test
- ☐ B. Salivary and lacrimal autoantibodies
- ☐ C. Fluorescein staining
- ☐ D. Full blood count
- ☐ E. Cervical and lumbar spine x-ray

Sjögren

49. A 31 year old previously healthy man who works at an engineering plant presents to the A and E department with a red eye. He is worried

that a metal fragment may have entered his eye. What is the most appropriate investigation?

- ☒ A. X-ray orbit
- B. Lacrimal sac washout
- C. Intraocular pressure measurement
- D. Blood tests
- E. Skin biopsy

50. A 60-year-old patient presents to his GP with sudden onset of redness in the left right eye. There was no pain and the vision was unaffected. What is the most appropriate diagnosis?

- A. Multiple sclerosis
- ☒ B. Sub-conjunctival haemorrhage
- C. Retinal detachment
- D. Acute closed angle glaucoma
- E. Migraine

51. A 72-year-old patient complains of severe pain in his right eye with severe deterioration of vision. He had noticed haloes around street lights for a few days before the onset of pain. What is the most appropriate diagnosis?

- ☒ A. Closed angle glaucoma
- B. Temporal arteritis
- C. Transient ischaemic attack
- D. Stroke
- E. Bacterial conjunctivitis

52. A 24-year-old man has a history of recurrent attacks of blurring of vision associated with redness, pain and photophobia. Both eyes have been affected in the past. His older brother is currently being investigated for severe backache. What is the most appropriate diagnosis?

- A. Scleritis
- B. Episcleritis
- ☒ C. Anterior uveitis
- D. Conjunctivitis
- E. Multiple sclerosis

53. A 28-year-old man who is a welder presents to his general practitioner (GP) with inability to see clearly with his left eye. What is the most likely diagnosis?
- A. Corneal abrasion
 - B. Conjunctivitis
 - C. Dry eyes
 - ✓ ☒ D. Intraocular foreign body
 - E. Migraine
54. A patient present to the A & E department after being hit on his right eye with a golf ball. What is the most likely diagnosis?
- ✓ ☒ A. Globe rupture
 - B. Uveitis
 - C. Foreign body
 - D. conjunctivitis
 - E. Bacterial keratitis
55. A 32-year-old man presents with sudden redness in his right eye. This is associated with headache vomiting, and poor vision. What is the most likely diagnosis?
- A. Conjunctivitis
 - ✓ ☒ B. Acute closed angle glaucoma
 - C. Foreign body
 - D. Corneal abrasion
 - E. Episcleritis
56. Examination of a 20-year-old male patient revealed bilateral miosis and irregular pupils. There was no response to light, but good response to accommodation. What is the most likely diagnosis?
- ✓ ☒ A. Iritis
 - B. Retinal detachment
 - C. Central retinal detachment
 - D. Central vein occlusion
 - E. Horner's syndrome
57. On examination of a 42 year old man his pupils were fixed and dilated the patient presented with chemosis and grossly oedematous eye lids. What is the most likely diagnosis?

Argyll Robertson

- A. Uveitis
- B. Conjunctivitis
- ✓ C. Acute closed angle glaucoma
- D. Foreign body
- E. Keratitis

58. A 32 year old woman presents with wasting and weakness of the hand associated with dissociated sensory loss over the trunk and arms. The right pupil is miotic and in addition she has partial ptosis. Her right face is anhidrotic and knees are swollen and grossly deformed. What is the most likely diagnosis?

- ✓ A. Horner's syndrome
- B. Holmes Adie pupil
- C. Syphilis
- D. Argyll Robertson pupil
- E. Anisocoria

59. A 21-year-old woman reports a sudden onset of blurring of near vision. The pupil is slightly dilated and there is a delayed response to accommodation and especially too, when light is shone in the eye. Her knee and ankle jerks are noticed to be absent. What is the most likely diagnosis?

- A. Horner's syndrome
- ✓ B. Holmes Adie pupil
- C. Syphilis
- D. Argyll Robertson pupil
- E. Anisocoria

60. A 25-year-old female has a blackout while watching a disco show on television with strobe lights on. What is the most likely diagnosis?

- A. Multiple sclerosis
- ✓ B. Epilepsy
- B. Migraine
- C. Brain tumour
- D. Cardiac attack
- E. Vasovagal Syncope

61. A 35-year-old man presents with red eye. There is a purulent discharge and he has injected conjunctiva. The iris looks normal and his vision is not affected. What is the most appropriate immediate management?
- A. Steroid eye drops
 - B. Oral antibiotics
 - C. Acyclovir eye drops
 - ✓ ☒ D. Chloramphenicol eye drops
 - E. Lubricant
62. A ~~80~~ 80 year old woman had a gradual decrease of visual acuity since the last 3 years. Now she has a disability due to very low vision. What's the diagnosis? A1
- A. Glaucoma
 - B. Cataract
 - ✓ ☒ C. Macular degeneration
 - D. Retinitis pigmentosa
 - E. Keratitis
63. A 28-year-old pregnant woman with polyhydramnios and Shortness of breath comes for an anomaly scan at 31 wks. US: absence of gastric bubble. What is the most likely diagnosis?
- A. Duodenal atresia
 - ✓ ☒ B. Oesophageal atresia
 - C. Gastroschisis
 - D. Exomphalos
 - E. Diaphragmatic hernia
64. A 52-year-old man has a painful, red, photophobic right eye with slightly blurred vision and watering for 3 days. He has had no such episodes in the past. On slit lamp examination there are cells and flare in the anterior chamber and pupil is sluggish to react. What is the most appropriate clinical diagnosis?
- A. Acute close-angle glaucoma
 - B. Acute Conjunctivitis
 - C. Acute Dacrocystitis
 - ✓ ☒ D. Acute iritis
 - E. Corneal foreign body
65. A 55 year old man who is hypertensive suddenly lost his vision. The retina is pale and fovea appears as a bright cherry red spot. What is the most appropriate treatment?

- A. Pan retinal photocoagulation
- B. Corticosteroids
- C. Scleral buckling
- D. Surgical extraction of lens

✓ ☒ E. Pressure over eyeball (ocular

CRAO

massage)

peracene

66. A 30-year-old woman presents with acute headache. She complains of seeing halos especially at night. What is the most likely visual defect?

- A. Para-central scotoma
- B. Mono-ocular field loss
- ✓ ☒ C. Tunnel vision
- D. Central scotoma
- E. Cortical blindness

glaucoma

67. A 37-year-old labourer comes with history of redness of left eye with foreign body sensation in the same eye. Where is likely lesion?

- A. Ciliary body
- B. Sclera
- C. Conjunctivitis
- ✓ ☒ D. Cornea
- E. Iris

68. A 24-year-old man with a painful red eye has had his eye stained with fluorescein drops. Areas of the cornea are stained yellow. Steroid eye drops are given and massive ulceration and blindness results. What is the most appropriate diagnosis?

- A. Viral Conjunctivitis
- B. Bacterial conjunctivitis
- ✓ ☒ C. Herpes simplex keratitis
- D. Herpes zoster
- E. Fungal keratitis

(dendritic ulcer)

69. A 35-year-old rugby player sustained facial injuries. Twelve months later he presented with a painful swelling at the left medial canthus, associated with red eye and purulent discharge. What is the most appropriate diagnosis?

- A. Conjunctivitis
- B. Anterior uveitis
- ✓ ☒ C. Dacryocystitis

- D. Facial nerve palsy
- E. Sinusitis

70. An 80-year-old woman had a gradual decrease of visual acuity since the last 3 years. Now she has a disability due to very low vision. What is the most likely diagnosis?

- A. Glaucoma
- B. Cataract
- ☒ C. Macular degeneration
- D. Retinitis pigmentosa
- E. Keratitis

71. A 52 year old man has a painful, red, photophobic right eye with slightly blurred vision and watering for 3 days. He has had no such episodes in the past. On slit lamp examination there are cells and flare in the anterior chamber and pupil is sluggish to react. What is the single most appropriate clinical diagnosis?

- A. Acute close-angle glaucoma
- B. Acute conjunctivitis
- C. Acute dacrocystitis
- ☒ D. Acute iritis
- E. Corneal foreign body

72. A 55-year-old man who is hypertensive suddenly lost his vision. The retina is pale and fovea appears as a bright cherry red spot. What is the single most appropriate treatment?

- A. Pan retinal photocoagulation
- B. Corticosteroids
- C. Scleral buckling
- D. Surgical extraction of lens
- ☒ E. Pressure over eyeball

73. A 30-year-old woman presents with acute headache. She complains of seeing halos especially at night. What is the most likely defect?

- A. Para central scotoma
- B. Mono-ocular field loss
- ☒ C. Tunnel vision
- D. Central scotoma
- E. Cortical blindness

74. A 37-year-old labourer comes with history of redness of left eye with foreign body sensation in the same eye. What is the most appropriate affected part?

- A. Ciliary body
- B. Sclera
- C. Conjunctivitis
- ☒ D. Cornea
- E. Iris

75. A seven year old North African boy gave history of two days in discomfort, redness and muco-purulent discharge affecting both eyes. His siblings have a similar problem. What is the most appropriate diagnosis?

- A. Bacterial conjunctivitis
- ☒ B. Trachoma
- C. Foreign body
- D. Corneal abrasion
- E. Cataract

76. A 69-year-old patient presents to his GP with sudden onset of redness in the right eye. There was no pain and vision was unaffected. What is the most appropriate mode of management?

- A. Chlorphenicol eye drops
- ☒ B. Check blood pressure and do anti-coagulant studies
- C. Immediate antibiotic therapy
- D. No treatment required
- E. Admit

